



Pawel Rosikiewicz

Data Analyst/Analytics Translator with
hands-on experience in, Molecular Biology,
Industrial R&D and Product development

Data Science
Machine Learning **EPFL**

Biostatistics
Pipeline Dev.



SkinDiagnosticAI

Swiss Institute of
Bioinformatics

R&D
Product Dev.

Project Management



UNIL | Université de Lausanne



ACHIEVMENTS

Founded SwissAI, one of the lagers AI meetups in Europe www.SwissAI.org

Promoted Reproducible Data Science & Personalized Medicine

- ⇒ EPFL- Applied Machine Learning Days; <https://swissai.org/amld-workshop/>
- ⇒ Meetup @Silicon Valley; <https://youtu.be/W624gdkDqRQ?t=1259>

Interviewed 150+ High-tech Professionals.

SELECTED PROJECTS & LEADERSHIP

Product Owner & Lead Data Scientist @ SkinDiagnosticAI

9/2020 - 6/2021

I developed open-source platform for analysis, and classification of medical images, with example of skin cancer. Managed, a team of 3 developers, and provided courses and workshops for users. <https://simpleai.ch/skin-diagnostic-ai/>

Project Manager @ Dronistics

8/2020 - 6/2021

I managed the project on adapting medical delivery drones to requirements from hospitals & rescue services, with the team working @Kings College London

My Open-Source for Bio-Projects; <https://github.com/PawelRosikiewicz>

- [PyClass](#) – Python package for classification & exploration of medical images for AI
- [PriceHook](#) – Workshop on developing reproducible AI models with real market value
- [DataFrame Explorer](#) - Dashboard for exploration structured data

SKILLS

Creative, Problem Solving, Team player, Great Organizer

Programming: Python, R, HTML, CSS, SQL, bash, git, Docker

BIG DATA & Machine Learning: scikit-learn, numpy, pandas, Scipy, Tensorflow, Keras,

Data Science: Advanced data analysis and visualizations, Experimental design, A-B testing, Pipeline Development, Dashboards, structured and unstructured data, Statistics, Regression, Classification, data Cleaning, EDA, dealing with missing data, simulated data

Molecular Biology applied to Plant & Fungi: Next Generation Sequencing (Illumina, PacBio, basics of MGI), RNA-seq, RAD-seq, WGS, Amplicon sequencing, Microarrays, microscopy, flow cytometry, FT-IR, qPCR, quantitative Pyrosequencing, microsatellites

Bioinformatics: Variant calling with NGS, fragment length analysis, QC for NGS and SNP data from multiple replicates and libraries, genetic analyses (QC for rare & somatic mutations)

Project management & Product Dev.: Practical experience with developing new well projects, product, MVPs and industrial procedures, Hands-on experience with scaling up R&D protocols to industrial scale. Defined values proposition and product Dev. Roadmap. Helped with business analyses, Market segmentation, Technical sales, and communication.

CONTACT

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Switzerland

Linkedin

www.linkedin.com/in/pawel-rosikiewicz/

GitHub

<https://github.com/PawelRosikiewicz>

My websites

www.SimpleAI.ch
www.SwissAI.org

LANGUAGES

Polish, *native*

English, *fluent*

French, *intermediate*

EDUCATION

**Applied Data Science
& Machine Learning**

EPFL-ext 2020

**Selected Courses in Machine
Learning & Data Science**

EPFL 2017-2019

Business Development

Venturelab, 2018/2019

MSc. Molecular Biology

UAM, Poznan, Poland, 2003-2009

CERTIFICATES

Introduction to ML in Production

*Practical Introduction to Machine
Learning & Deep Learning*

*Computer skills for biological
research*

*Bayesian Models for Population
Genomics*

*Analysis of differential gene
expression*



WORK EXPERIENCE

2021

Product Developer (Subject Matter Expert) @ [MycoSenseAI](#)

- Created concept, and product dev. roadmap for AI-powered system helping with the industrial production of edible mushrooms

9.2019 - 6.2021

Project Manager @ [Dronistics](#)

** I worked in a company twice, First, as consultant in 2019, and then, as project manager in 2020-2021*

- I led remote R&D team @ [Kings College London](#) (see Projects & Leadership section)
- Provided business Intelligence services to company
- Helped with product development, technical sales, and marketing.

11. 2019 – 10.2020

Data Scientist & Business Analyst @ [GenomSys SA](#)

- Developed bioinformatic pipelines for analysis of variant calling data from NGS
 - Selected tools and datasets for pipeline development and benchmarking
 - Developed QC steps for new pipeline with Python, GATK, bash, awk, and seqtools
- Provided direct support to company managers, and board members (R&D & BI projects)
 - Performed feasibility study for new software products, clients and partners
 - Utilized SQL & Python to search large public databases, eg: on genetic tests registry
 - Evaluated market value & requirements for company products,
- Supported sales & marketing teams

11.2018 – 4.2020

Subject Matter Expert in Biotech @ [Evolagic Technologies GmbH](#)

- Implemented, from scratch, new system for industrial production of microorganism's *in vitro*
- Conducted several R&D projects for product dev. & management teams
- Assisted with documentation digitization, and production standards implementation

12.2015 – 9.2016

Bioinformatician @ [SiB, Swiss Institute of Bioinformatics](#)

- Worked on reproducibility problems in BIG DATA from NGS
- Developed GapJumper; a software used for analysis of genetic markers

11.2013 – 9.2015

Bioinformatician @ [University of Lausanne](#)

- I analyzed variant calling data from 1000+ NGS libraries, (~1TB of raw data) to
 - Studied genetic exchange in polyploid microorganisms
 - ... and genetic & phenotypic stability in microorganisms used as biofertilizers
- Developed & benchmarked new algorithms for analysis of variant calling data:
 - for parent-offspring analysis in clonal & polyploid organisms
 - detection of somatic mutations

9.2009 – 11.2013

Molecular Biologist @ [University of Lausanne](#),

- Designed, & Managed several large-scale research projects
 - budget up to 300.000CHF & managed the team of up to 5 people
 - Utilized combination of fluorescent microscopy, *in vitro* techniques, molecular biology (eg: variant calling, WGS, RNAseq, RAD-seq, qPCR, amplicon sequencing), Bioinformatics and Statistics, to conduct experiments and analyze the data on soil microorganisms

MY SELECTED PROJECTS WITH PRACTICAL APPLICATIONS TO INDUSTRY

- Led the laboratory team for genome sequencing on PacBio platform
Publication <https://doi.org/10.1073/pnas.1313452110> - cited over 500x!
- Created new strains of microorganisms that were later used commercially
Publication <https://doi.org/10.1007/s00572-017-0763-2>
- Developed cost-efficient protocol for generating RAD-seq markers with illumina HiSeq)
The protocol was used to prepare at least 6000 NGS libraries in Switzerland, Israel and Mexico
Publication with first use: <https://doi.org/10.1038/ismej.2016.29>

2.2009 – 9.2009

Molecular Biologist @ [Institut National de Recherche Agronomique, INRA, Nancy, France](#)

- Studied gene expression in microorganisms with custom microarrays (Nimblegene), qPCR and *in vitro* techniques.

2006 - 2009

Molecular Biologist @ [PAN, Polish Academy of Science](#)

- Used RFLP, microsatellites, 18sRNA, microscopy, and *in vitro* methods to study mycorrhizal fungi diversity in naturally and artificially restored forests, on arable soil.
- Worked on improving of reproducibility of genetic markers

Internships in Molecular & Experiment Biology focused on Fungi in Agronomy

@ [UCD Dublin, Ireland](#), studied gene expression in wheat exposed to toxins from plant pathogens

@ [Lomonosov University, Akhangielsk, Russia](#), conducted research projects in Russian taiga forest on mycorrhiza

NGOs

from 2017

Founder & Team Leader @ [SwissAI](#)

“Active community of over 4000 AI & Data science professionals”

- I founded and managed all activities of SwissAI for several years:
 - Managed team of up to 8 people & Organized frequent public events, & workshops
 - Responsible for fund raising, speaker recruiting & hiring employees,
 - Marketing for SwissAI, eg. in social media, movie recording, interviews,
 - Facilitated knowledge exchange between academia and industry
 - LINK: www.SwissAI.org

